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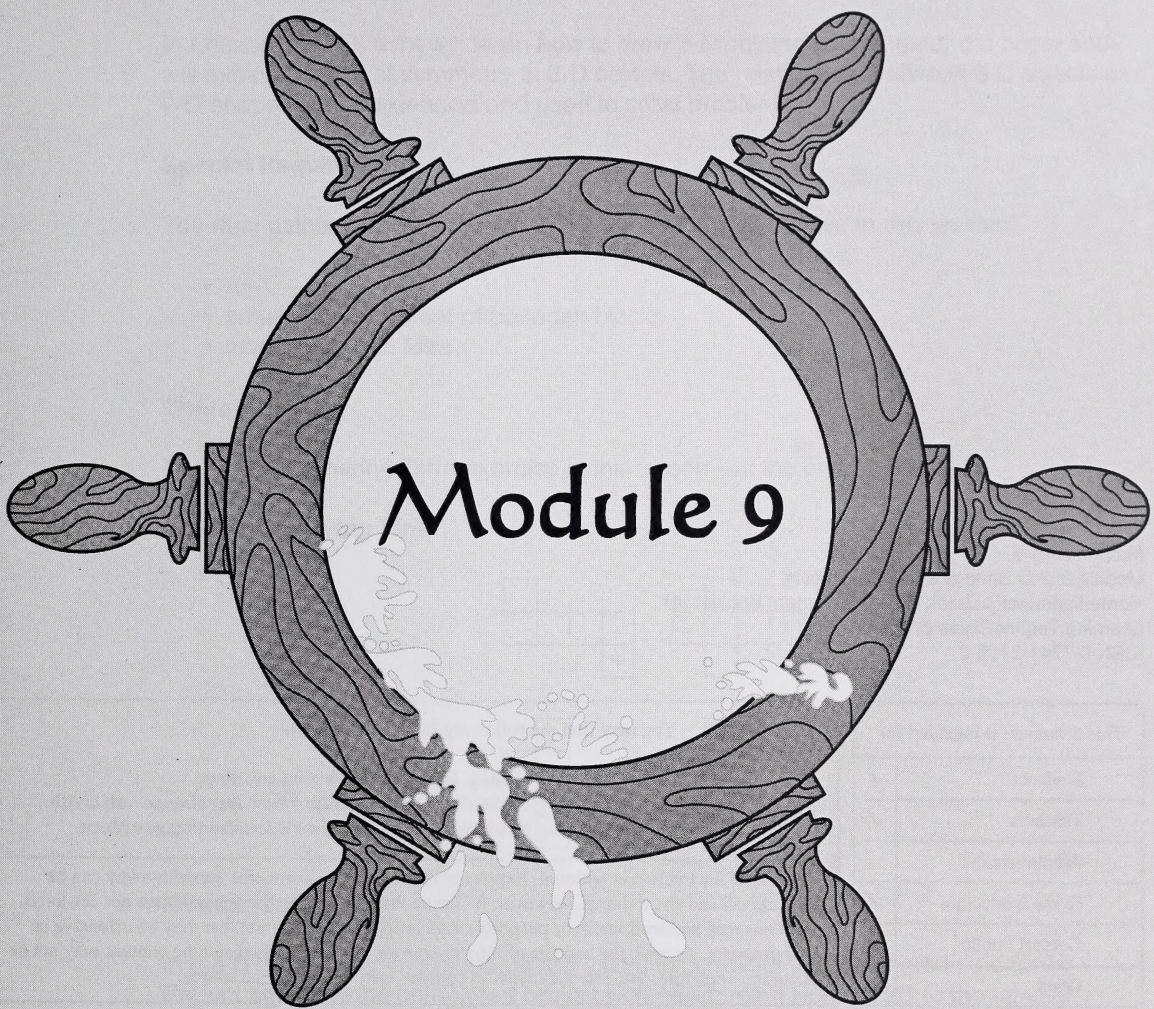
Mathematics 5



Home Instructor's Guide and Assignment Booklet 9B

Learning Technologies Branch

Alberta LEARNING

Mathematics 5
Module 9: 2-D Shapes and 3-D Objects
Home Instructor's Guide and Assignment Booklet 9B
Learning Technologies Branch
ISBN 0-7741-2106-8

This document is intended for	
Students	✓
Teachers	✓
Administrators	
Home Instructors	✓
General Public	
Other	

You may find the following Internet sites useful:

- Alberta Learning, **http://www.learning.gov.ab.ca**
- Learning Technologies Branch, **http://www.learning.gov.ab.ca/ltb**
- Learning Resources Centre, **http://www.lrc.learning.gov.ab.ca**

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Lesson 3: Building and Drawing 3-D Objects

Overview

In Lesson 3 the student will learn how to draw 3-D objects on triangular dot paper and will explore planes of symmetry in 3-D objects. The relationship between 3-D objects and 2-D shapes will be extended and used to solve problems.

Special Requirements

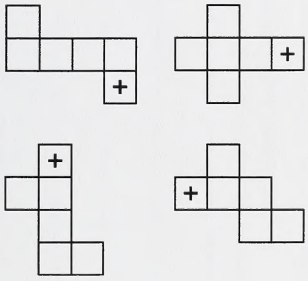
You may gather the following materials for your student to use in this lesson:

- ruler
- small cubes from set of base ten blocks
- mirror or plastic Mira

Sharing Time

There is one Sharing Time exercise in this lesson—at the end of Activity 3.

Activity 3 Sharing Time



Module Summary

In the Module Summary students are asked to complete the Numbers in the News Project and send the completed project with Assignment Booklet 9B to the teacher.

Following the Module Summary are Keystrokes and Review. These special activities can be assigned at a later time to review the module ideas and prepare for the final test.

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ASSIGNMENT BOOKLET 9B

Mathematics 5
Module 9: Lesson 3 Assignment and Numbers in the News

Home Instructor's and Student's Comments:

STUDENT FILE NUMBER
(if label is missing or incorrect)

_____

Date Submitted:

_____

Apply Module Label Here

Name

Address

Postal Code

Please verify that preprinted label is for correct course and module.

FOR SCHOOL USE ONLY

Assigned Teacher:

_____

Date Assignment Received:

_____

Grading:

_____

Teacher's Comments

_____

Teacher's Signature

Home Instructor: Keep this sheet when it is returned to you as a record of the student's progress.

INSTRUCTIONS FOR SENDING IN THIS DISTANCE LEARNING ASSIGNMENT BOOKLET

When you register for distance learning courses, you are expected to send in Assignment Booklets for corrections regularly. Try to send each Assignment Booklet as soon as you have completed it. Before sending your Assignment Booklet, please check the following:

- Are all the assignments completed? If not, explain why.
- Has your work been reread to be sure the spelling and details are correct?
- Is the record form filled out and the correct module label attached?

MAILING

1. Postage Regulations

Do **not** enclose letters with Assignment Booklets.

Send all letters in a separate envelope.

2. Postage Rates

Take your Assignment Booklet to the post office and have it weighed. Attach enough postage and seal the envelope. Assignment Booklets will travel faster if correct postage is used and if they are in large envelopes that are no more than two centimetres thick.

FAXING

1. Assignment Booklets may be faxed. Contact your teacher for the fax number.

2. All faxing costs are the responsibility of the sender.

E-MAILING

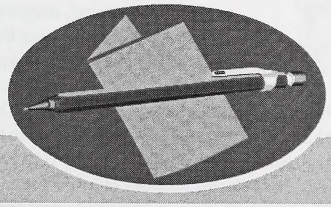
Assignment Booklets may be e-mailed. Contact your teacher for the e-mail address.

Mathematics 5

Module 9

2-D Shapes and 3-D Objects

Assignment Booklet 9B



Learning Technologies Branch

Alberta LEARNING

FOR TEACHER'S USE ONLY

Summary

	Total Possible Marks	Your Mark
Lesson 3 Assignment	30	
Numbers in the News	10	
	40	

Teacher's Comments

Mathematics 5
Module 9: 2-D Shapes and 3-D Objects
Assignment Booklet 9B
Lesson 3 Assignment and Numbers in the News
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ASSIGNMENT BOOKLET 9B
MATHEMATICS 5—MODULE 9: 2-D SHAPES AND 3-D OBJECTS

Your mark on this module will be determined by how well you do your assignments in the Assignment Booklets.

Work slowly and carefully. If you are having difficulties, go back and review the appropriate lessons.

There is one lesson assignment and a Numbers in the News project in this Assignment Booklet. The total value of the lesson assignment is 30 marks. The Numbers in the News project is worth 10 marks. The value of each assignment is stated in the left margin.

Be sure to proofread each assignment carefully.

30

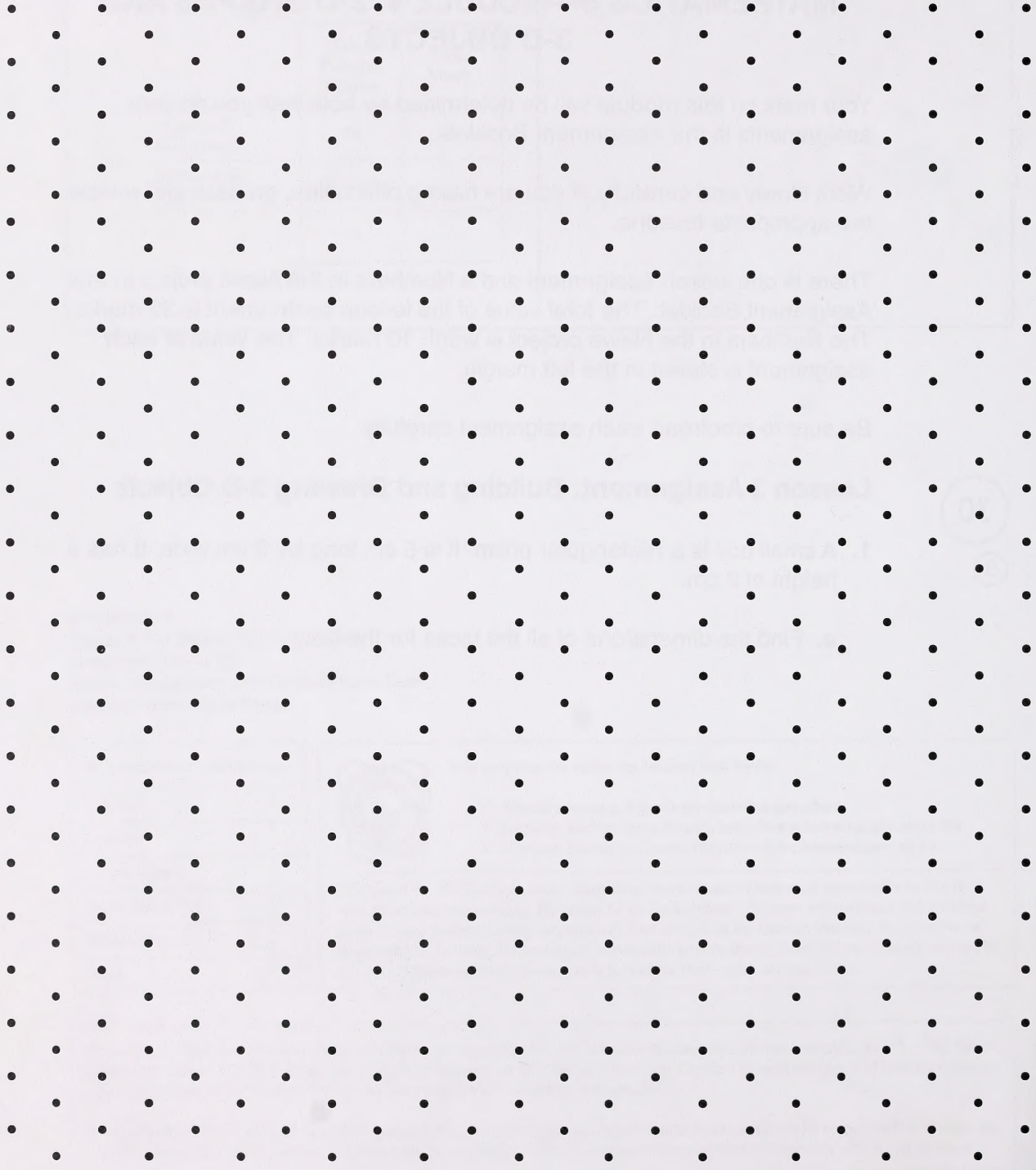
Lesson 3 Assignment: Building and Drawing 3-D Objects

3

1. A small box is a rectangular prism. It is 5 cm long by 3 cm wide. It has a height of 2 cm.

a. Find the dimensions of all the faces for the box.

(4) **b.** Draw and label the box on the triangular dot paper.



2. The dimensions of a block of cheese are 4 cm by 5 cm by 6 cm.

(6) Draw and label three different pictures of the cheese on the triangular paper so that each picture has a face of a different shape on top.

(3) **3.** Two dimensions of one rectangular solid are 4 cm by 5 cm and two dimensions of another rectangular solid are 3 cm by 6 cm. Could these two solids both have a face with the same dimensions? Explain.

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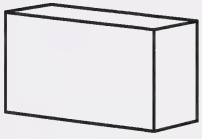
4. How many planes of symmetry does each of the following solids have? **Hint:** You may wish to make clay figures and cut them to find the lines of symmetry.

(2) **a.**

_____

(2) **b.** 

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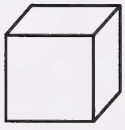
(2) **c.** 

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5. Two storage crates with flat lids are built in the shape of rectangular prisms. The lid of one crate measures 4 dm by 5 dm and the lid of the other crate measures 3 dm by 4 dm.

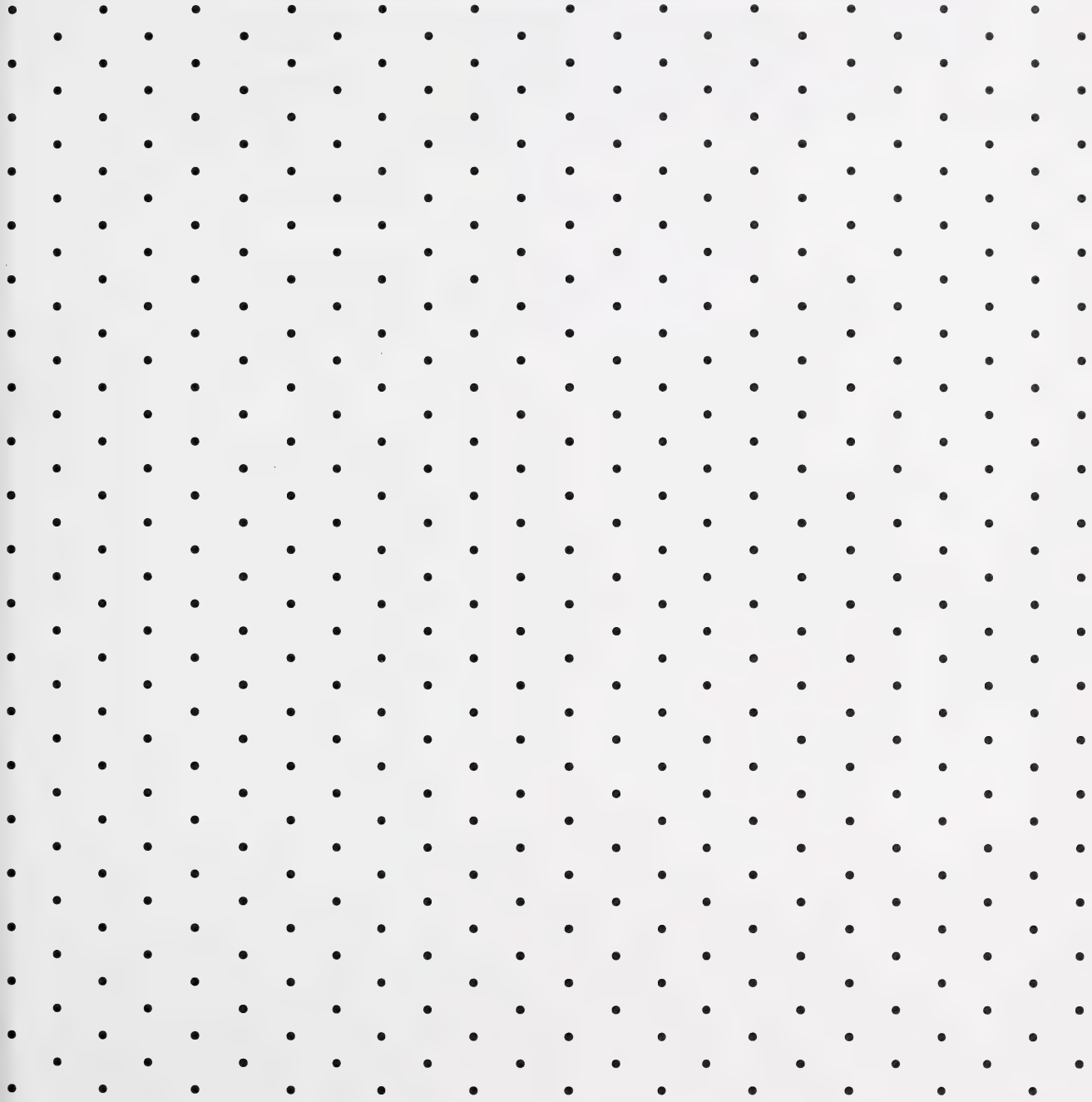
(2) **a.** Explain how both crates could have faces with the same dimensions.

_____

_____

_____

④ **b.** Use the triangle dot paper to draw pictures of both crates, showing their lids on the top. Label the dimensions.



(2) **6.** A vase that is shaped like a prism has an equilateral triangle for its base. The perimeter of the base is 27 cm. If the vase is 30 cm high, what are the measures of the sides of its faces? Explain.

_____

_____

_____

_____

10

NUMBERS IN THE NEWS

Go through the scavenger hunt list for Module 9 so you have clipped at least one example for each question. Ask your home instructor to check the samples you found. Choose the sample you wish to use, and label each one with the scavenger hunt number it matches. Organize your samples and put them together with any other information required. Submit your project with this Assignment Booklet.

Ask yourself the following questions:

- Is my Numbers in the News project complete?
- Do my samples show the ideas clearly?
- Did I take care to be neat when organizing and labelling my work?

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